

REMARKS

The present letter and amendment are in response to an office action for the above captioned application, which went abandoned on January 31, 2004 for failure to file a timely response to the office action. The office action was originally mailed on January 31, 2003 and received by the present attorneys, who are listed on the Revocation of Existing Power of Attorney and New Power of Attorney, which is being filed concurrently. (See copy attached.)

The amendment is accompanied by a Petition to Revive Unintentionally Abandoned Application under 37 C.F.R. §1.137(b).

In the office action the Examiner rejects claim 1, the only claim in the originally filed application, as anticipated by the article entitled "A Monocular Vision System for Autonomous Vehicle Guidance" by Maganto et al. In the present amendment claim 1 is cancelled and new claims 2-24 are added.

Claim 2 recites a method of determining a contour of a roadway from an image of a scene comprising the roadway by defining a plurality of real space curves that are candidates for lying along the roadway and for each curve determining a value that is a function of gradients of pixel intensities for locations along the curve. The specification describes different procedures for performing the inventive method of claim 2.

The cost function recited in claim 3 is supported throughout the specification, e.g. page 9 line 21, page 10, line 5.

The material recited in claim 4 is supported by the discussion of the warped image Ψ' . Determining derivatives perpendicular to the lines is equivalent to taking derivatives along the x-direction in the warped image Ψ' described on page 10 lines 10-12.

The material in claims 5-11 is supported by the discussion on page 10 lines 6-21 and page 13 lines 9-19. The cited section on page 10 describes a cost function determined responsive to squares of derivatives and in the cited section on page 13 absolute values of derivatives are used to determine a cost function.

A method comprising partitioning the camera image into near and far portions as claimed in claim 12 is repeatedly discussed in the application, e.g. page 8 lines 8-11, page 9 lines 7-14, page 14 lines 12-14 and is illustrated in Fig. 3.

With regard to claim 13, transforming the image is described and used throughout the application, e.g. page 5 lines 17-20 and discussions of warped images Ψ' on page 8 lines 8-20 and page 9 line 21.

Claim 14 is supported by the text on page 14 lines 15-21.

Candidate curves that are arcs of circles are discussed on page 4 line 18 to page 11 line 14 and the discussion in this portion of the text supports the material recited in claims 15-18.

The discussion on page 11 line 15 to page 14 line 22 describes candidate curves that are portions of parabolas and supports claims 18-22. In particular, claim 20 is supported by the text on page 11 line 16, claim 21 is supported by the text on page 11 lines 20-21, claim 22 is supported by the text on page 14 line 5, and claim 23 is supported by the text on page 14 lines 10-12.

Candidate curves that are straight lines, claimed in claim 24, are discussed on page 9 lines 6-8 page 14 lines 4 and 5.

"Pitch" claimed in claim 25 is supported in the specification on page 6 line 10 - page 7 line 2, page 13 lines 3-21.


Weighting gradients, claimed in claim 26 is supported on page 10 lines 12-15.

The article by Maganto et al. does not teach or imply in any manner using candidate curves to determine a road contour and therefore does not support an anticipation rejection of claim 2. The dependent claims in the amended claim set are either patentable through dependence on claim 2 or through patentable material that they recite.

In view of the above, applicant submits that all the claims in the amended claims set are patentable.

An action on the merits is respectfully awaited.

Respectfully submitted,
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August 19, 2004
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